REMARKS

Applicants hereby acknowledge the Examiner Interview between the Examiner, Alexander O. Williams, and Attorney for Applicants, Serge J. Hodgson, on August 13, 2004. Co-filed herewith is a completed Applicant Initiated Interview Request Form PTOL-413A, which was faxed to the Examiner on August 11, 2004, prior to the Examiner interview, and completed by the Attorney for Applicants following the Examiner Interview. Agreement was not reached as to whether Claims 1-15, 23-25, and 30-41 are patentable over Choo et al.

Claims 1-15, 23-25, and 30-41 are patentable over Choo et al. (6,407,360).

Regarding Claim 1, the Examiner states:

> … Choo et al. (figures 1 to 37) specifically figures 5 and 20 show a wafer **100** comprising: a first surface **(top of 100)**; a second surface (bottom of 100); a fist scribe line **120a** coupled to said first surface, said first scribe line extending in a first direction; a second scribe line **120b** coupled to said first surface, said second scribe line extending in a second direction perpendicular to said first direction; **and a first alignment mark (127, see figure 20) formed at an intersection of said first scribe line and said second scribe line** (Office Action, pages 2-3, emphasis added and in original.)

However, the Examiner admits:

> Choo et al. **fail to explicitly show said first alignment mark extending from said first surface to said second surface**. (Office Action, page 3, emphasis added.)

To cure this glaring deficiency, the Examiner further asserts:

> However, Choo et al. does discloses before cutting the wafer, **pre-cut grooves** at the start edge, end edge, **or cross point of a marked cutting line to selected depth**

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> **(see figure 5 and column 6, lines 54-58 and column 7, lines 9-18).**
> … Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to use the teaching of Choo et al.'s depth of groove in a alignment mark to be a hole from a first surface to a second surface for the purpose of providing alignment mark for other procedures can be completed accurately for the completion of making a device. (Office Action, pages 3 and 5, emphasis in original.)

The Examiner's assertion that **the alignment mark is "a hole from a first surface to a second surface" is respectfully traversed.** Choo et al. teaches that the purpose of the pre-cut grooves is to prevent deviation of **the crack that actual cuts** the substrate. Accordingly, **Choo et al. teaches away from having the pre-cut grooves extend all the way through the substrate** since this would defeat the cutting of the substrate by the crack.

Specifically, Choo et al. teaches:

> Meanwhile, when the cutting lines cross each other, it is difficult to perform a secondary cutting step using a laser beam if the substrate is first cut by a laser beam. The reason is that the cut face cut by the first laser cutting is very smooth. Therefore, when secondary cutting is performed using a laser beam along direction normal to the first cutting line, **propagation of the crack stops** prior to the crossing point of the first and secondary cutting lines.
>
> Thus, in the present embodiment, **so as to properly cut a substrate with a crossing point, a pre-cut groove is formed in the crossing point of the cutting lines.** …
>
> According to the above method, **while the crack is propagating along the second cutting line 120b,** although the cross point appears, **since pre-cutting groove has been formed at the cross point, the crack propagates with linearity passing the cross point till reaching the end edge of the second cutting line.** (Col. 13, lines 5-57, emphasis added.)

Further, Choo et al. teaches the desirability of a smooth cut face:

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> It is still another object of the present invention **to obtain a smooth cut face** of a glass substrate and a panel. (Col. 3, lines 35-37, emphasis added.)

Accordingly, Choo et al. teaches away from cutting the substrate all the way through with the pre-cut grooves as asserted by the Examiner and then cutting the remainder of the substrate with the crack as this would inherently cause an uneven cut face.

For at least the above reasons, Choo et al. does not teach or suggest a wafer comprising:

> a first surface;
> a second surface;
> a first scribe line coupled to said first surface, said first scribe line extending in a first direction;
> a second scribe line coupled to said first surface, said second scribe line extending in a second direction perpendicular to said first direction; and
> a first alignment mark formed at an intersection of said first scribe line and said second scribe line, **said first alignment mark extending from said first surface to said second surface**,

as recited in Claim 1, emphasis added. Accordingly, Claim 1 is allowable over Choo et al. Claims 2-15, 30, 41, which depend from Claim 1, are allowable for at least the same reasons as Claim 1.

Claims 23, 37 and 40 are allowable for reasons similar to Claim 1. Claims 24-25, 31-36, which depend from Claim 23, are allowable for at least the same reasons as Claim 23. Claims 38-39, which depend from Claim 37, are allowable for at least the same reasons as Claim 37.

For the above reasons, Applicants respectfully request reconsideration and withdrawal of this rejection.

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CONCLUSION

Claims 1-15, 23-25, 30-41 are pending in the application. For the foregoing reasons, Applicants respectfully request allowance of all pending claims. If the Examiner has any questions relating to the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant(s).

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 13, 2004.

Attorney for Applicant(s)

August 13, 2004
Date of Signature

Respectfully submitted,

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